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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,315	11/17/2003	Michael R. Berrigan	57586US002	5098

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EXAMINER
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PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/715,315

Applicant(s)

BERRIGAN ET AL.

Examiner

Andrew T. Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-8, 11-16 and 18-42 is/are pending in the application.
- 4a) Of the above claim(s) 3-5, 7, 18 and 21-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2, 6, 8, 11-16, 19, 20, 41 and 42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/17/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed on 1/11/2006 has been entered. The examiner has withdrawn the objection to the drawings based on the newly submitted drawings. The examiner has withdrawn the objection to claim 9 based on the cancellation of claim 9. The examiner has withdrawn the objection to the specification based on the cancellation of claim 10. The examiner has withdrawn the rejections of claims 1, 9, 10 and 17 based on the cancellation of claims 1 and 17. Applicant's amendment necessitated the new grounds of rejection presented in this Office action.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are dependent on cancelled claim 10. There is insufficient antecedent basis for the limitations in these claims.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 6, 8, 11-14, 16, 19-20 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2002/0102897 to Berrigan et al. (hereinafter referred to as Berrigan) in view of anyone of USPN 4,692,371 to Morman et al. (hereinafter referred to as Morman), USPN 5,635,290 to Stopper et al. (hereinafter referred to as Stopper), or USPN 5,652,051 to Shawver et al. (hereinafter referred to as Shawver).

Regarding claims 2, 6, 8, 11-14, 16, 19-20 and 41-42, Berrigan discloses a coherent nonwoven fibrous web comprising directly formed fibers (see entire document including [0008], [0022] and Figure 1). Berrigan discloses that any fiber forming polymeric material may be used including polymers such as block copolymers and styrene-based polymers ([0040]), but Berrigan does not specifically mention elastic fibers. Morman, Stopper, and Shawver each disclose that it is known in the nonwoven fabric art to use elastic styrenic block copolymer fibers (see entire documents including the abstract of Morman, column 1, lines 45-65 and column 7, lines 15-67 of Stopper, and column 6, lines 43-67 of Shawver). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the fibers from any suitable polymeric material, such as an elastic styrenic block copolymer, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Berrigan does not specifically mention the claimed properties of the nonwoven web (dimensionally stable with a birefringence number of at least  $1 \times 10^{-2}$ ), but the nonwoven web taught by the applied prior art is made with identical fiber material (elastic styrenic block copolymer) and with an identical process (see Figures 1-3) compared to the material and method disclosed/claimed in the current specification. In addition, Berrigan discloses that the fiber molecules are oriented ([0051]) and that the operating parameters may be varied to obtain the desired orientation (strain) ([0046]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the operating parameters to obtain the desired orientation, because it is understood by one of ordinary skill in the art that fiber orientation is directly related to the dimensional stability (heat shrinkage) of a fiber and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 8 and 19, Berrigan does not specifically mention an anneal step, but the current specification discloses that an anneal step simply releases strain (reduces orientation) by shrinking the fiber by more than 10% (see page 4, lines 1-10). Considering that the applicant does not claim a specific fiber size, and considering that Berrigan discloses that the operating parameters may be varied to obtain the desired orientation (strain) ([0047]), it appears that the nonwoven web taught by the applied prior art is substantially identical to the claimed web even without an anneal step.

Absent a showing to the contrary, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of

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patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claims 13 and 14, Berrigan discloses that the fibers may be thermally bonded ([0043] and [0056]).

Regarding claim 14, Berrigan discloses that bonds may be autogenous bonds ([0048]).

Regarding claims 16 and 20, Berrigan does not specifically mention strain-induced crystallization, but the current specification discloses that the morphology of the fiber is dependent on the chemical composition of the fiber (see page 5, lines 27-31). Considering that the nonwoven web taught by the applied prior art is made with identical fiber material (elastic styrenic block copolymer) and with an identical process (see Figures 1-3) compared to the material and method disclosed/claimed in the current specification, it appears that the elastic fibers taught by the applied prior art inherently possesses strain-induced crystallization.

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6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2002/0102897 to Berrigan in view of anyone of USPN 4,692,371 to Morman, USPN 5,635,290 to Stopper, or USPN 5,652,051 to Shawver as applied to claims 2, 6, 8, 11-14, 16, 19-20 and 41-42 above, and further in view of USPN 5,714,107 to Levy.

Berrigan discloses that the fibers may be thermally bonded ([0043] and [0056]) and/or that the bonding agents may be added to the web ([0045]), but Berrigan does not specifically mention hydroentangling the fibers. Levy discloses that it is known in the nonwoven fiber bonding art to thermally bond fibers, autogenously bond fibers, or hydroentangle fibers (see entire document including column 5, line 12 through column 6, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to bond the fibers by any suitable method, such as hydroentanglement, because hydroentanglement is a viable alternative to thermally bonding, and because it is within the general skill of a worker in the art to select a known bonding method on the basis of its suitability and desired characteristics.

7. Claims 2, 6, 8, 11-14, 16, 19-20 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2002/0102897 to Berrigan in view of anyone of USPN 4,692,371 to Morman, USPN 5,635,290 to Stopper, or USPN 5,652,051 to Shawver as applied to claims 2, 6, 8, 11-14, 16, 19-20 and 41-42 above, and further in view of USPN 3,783,649 to Yamamoto et al. (hereinafter referred to as Yamamoto).

Regarding claims 2, 6, 8, 11-14, 16, 19-20 and 41-42, Berrigan does not specifically mention the claimed properties of the nonwoven web (dimensionally stable with a birefringence number of at least  $1 \times 10^{-2}$ ), but the nonwoven web taught by the applied prior art is made with

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identical fiber material (elastic styrenic block copolymer) and with an identical process (see Figures 1-3) compared to the material and method disclosed/claimed in the current specification. In addition, Berrigan discloses that the fiber molecules are oriented ([0051]) and that the operating parameters may be varied to obtain the desired orientation (strain) ([0046]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the operating parameters to obtain the desired orientation, because it is understood by one of ordinary skill in the art that fiber orientation is directly related to the dimensional stability (heat shrinkage) of a fiber and because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

In the event that it is shown that it would not have been obvious to one having ordinary skill in the art at the time the invention was made to vary the operating parameters to obtain the desired orientation, Yamamoto is cited to show that it is well known in the fiber art to subject fibers to an anneal step to improve the qualities of the fibers by improving orientation of the molecular structure and/or relaxing interior strain (see entire document including column 1, lines 19-59). It would have been obvious to one having ordinary skill in the art at the time the invention was made to subject the nonwoven web to an anneal step, because an anneal step improves the qualities of the fibers by improving orientation of the molecular structure and/or relaxing interior strain. Considering that the applied prior art teaches an anneal step, and considering that the current specification discloses that an anneal step releases strains that would otherwise cause a web to shrink upon heating (see page 3, lines 8-14), it appears that the web taught by the applied prior art is dimensionally stable and possesses a birefringence number of at least  $1 \times 10^{-2}$ .



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8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Application Publication 2002/0102897 to Berrigan in view of anyone of USPN 4,692,371 to Morman, USPN 5,635,290 to Stopper, or USPN 5,652,051 to Shawver, and in view of USPN 3,783,649 to Yamamoto as applied to claims 2, 6, 8, 11-14, 16, 19-20 and 41-42 above, and further in view of USPN 5,714,107 to Levy.

Berrigan discloses that the fibers may be thermally bonded ([0043] and [0056]) and/or that the bonding agents may be added to the web ([0045]), but Berrigan does not specifically mention hydroentangling the fibers. Levy discloses that it is known in the nonwoven fiber bonding art to thermally bond fibers, autogenously bond fibers, or hydroentangle fibers (see entire document including column 5, line 12 through column 6, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to bond the fibers by any suitable method, such as hydroentanglement, because hydroentanglement is a viable alternative to thermally bonding, and because it is within the general skill of a worker in the art to select a known bonding method on the basis of its suitability and desired characteristics.

#### ***Response to Arguments***

9. Applicant's arguments filed 1/11/2006 have been fully considered but they are not persuasive.

The applicant asserts that the applied prior art does not read on the claimed nonwoven web because Example 35 of Berrigan has a total distance of travel (distance from the die to the attenuator plus the distance from the attenuator to the collector) of about 91 cm while Examples 1 and 2 of the current specification have a distance of over 160 cm. The examiner respectfully

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disagrees. The applicant asserts that the distance is chosen to achieve orientation that is “locked-in,” but the current claims do not mention a claimed “locked-in” orientation. In addition, Berrigan discloses that the distance from the die to the attenuator and the distance from the attenuator to the collector can be varied to obtain different effects (see [0021] and [0022]).

Regarding claims 8 and 19, the applicant asserts that the applied prior art does not read on the claimed nonwoven web because Berrigan does not teach an annealing procedure. The examiner respectfully disagrees. Berrigan does not specifically mention an anneal step, but the current specification discloses that an anneal step simply releases strain (reduces orientation) by shrinking the fiber by more than 10% (see page 4, lines 1-10). Considering that the applicant does not claim a specific fiber size, and considering that Berrigan discloses that the operating parameters may be varied to obtain the desired orientation (strain) ([0047]), it appears that the nonwoven web taught by the applied prior art is substantially identical to the claimed web even without an anneal step.

In the event that it is shown that it would not have been obvious to one having ordinary skill in the art at the time the invention was made to vary the operating parameters to obtain the desired orientation, Yamamoto is cited to show that it is well known in the fiber art to subject fibers to an anneal step to improve the qualities of the fibers by improving orientation of the molecular structure and/or relaxing interior strain (see entire document including column 1, lines 19-59). It would have been obvious to one having ordinary skill in the art at the time the invention was made to subject the nonwoven web to an anneal step, because an anneal step improves the qualities of the fibers by improving orientation of the molecular structure and/or relaxing interior strain. Considering that the applied prior art teaches an anneal step, and

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considering that the current specification discloses that an anneal step releases strains that would otherwise cause a web to shrink upon heating (see page 3, lines 8-14), it appears that the web taught by the applied prior art is dimensionally stable and possesses a birefringence number of at least  $1 \times 10^{-2}$ .

### ***Conclusion***

10. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

atp

g7D 3/3/06  
**ANDREW T. PIZALI**  
**PATENT EXAMINER**

  
**TERREL MORRIS**  
**SUPERVISORY PATENT EXAMINER**  
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